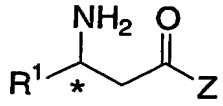
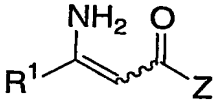
WHAT IS CLAIMED IS:

1. A process for preparing a compound of structural formula I:



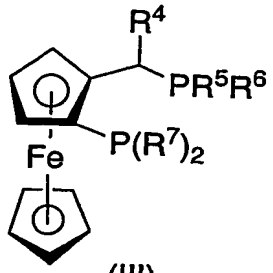
(I)

having the (*R*)- or (*S*)- configuration at the stereogenic center marked with an *;
in an enantiomeric excess of at least 70% over the opposite enantiomer, wherein
Z is OR^2, SR^2, or NR^2R^3;
R^1 is C_{1-8} alkyl, aryl, heteroaryl, aryl-C_{1-2} alkyl, or heteroaryl-C_{1-2} alkyl;
R^2 and R^3 are each independently hydrogen, C_{1-8} alkyl, aryl, or aryl-C_{1-2} alkyl; or R^2 and R^3 together with the nitrogen atom to which they are attached form a 4- to 7-membered heterocyclic ring system optionally containing an additional heteroatom selected from O, S, NH, and NC_{1-4} alkyl, said heterocyclic ring being unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, C_{1-4} alkoxy, and C_{1-4} alkyl wherein alkyl and alkoxy are unsubstituted or substituted with one to five fluorines; and said heterocyclic ring system being optionally fused with a 5- to 6-membered saturated or aromatic carbocyclic ring system or a 5- to 6-membered saturated or aromatic heterocyclic ring system containing one to two heteroatoms selected from O, S, and NC_{0-4} alkyl, said fused ring system being unsubstituted or substituted with one to two substituents selected from hydroxy, amino, fluorine, C_{1-4} alkyl, C_{1-4} alkoxy, and trifluoromethyl;
comprising the step of hydrogenating a prochiral enamine of structural formula II:



(II)

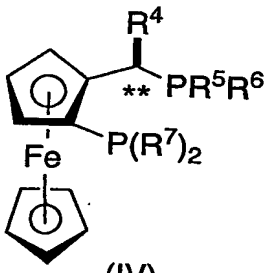
in a suitable organic solvent in the presence of a transition metal precursor complexed to a chiral ferrocenyl diphosphine ligand of structural formula III:



(III)

wherein R^4 is C_{1-4} alkyl or aryl;
R^5 and R^6 are each independently C_{1-6} alkyl, C_{5-12} cycloalkyl, or aryl; and
R^7 is C_{1-4} alkyl or unsubstituted phenyl.

2. The process of Claim 1 wherein said ferrocenyl diphosphine ligand is of structural formula IV:



(IV)

wherein the stereogenic center marked with an ** has the (*R*)-configuration.

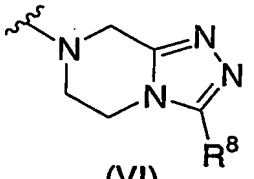
3. The process of Claim 2 wherein R^4 is C_{1-2} alkyl, R^5 and R^6 are C_{1-4} alkyl, and R^7 is unsubstituted phenyl.

4. The process of Claim 3 wherein R^4 is methyl, R^5 and R^6 are *t*-butyl, and R^7 is unsubstituted phenyl.

5. The process of Claim 1 wherein R^1 is benzyl wherein the phenyl group of benzyl is unsubstituted or substituted one to three substituents selected from the group consisting of fluorine, trifluoromethyl, and trifluoromethoxy.

6. The process of Claim 1 wherein Z is OR^2 or NR^2R^3.

7. The process of Claim 6 wherein NR^2R^3 is a heterocycle of the structural formula VI:



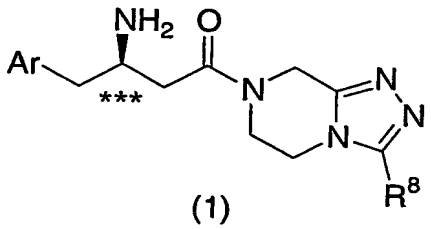
(VI)

wherein R^8 is hydrogen or C_{1-4} alkyl which is unsubstituted or substituted with one to five fluorines.

8. The process of Claim 1 wherein said transition metal precursor is $[M(cod)Cl]_2$, $[M(norbornadiene)Cl]_2$, $[M(cod)_2]X$, or $[M(norbornadiene)_2]X$ wherein X is methanesulfonate, trifluoromethanesulfonate, tetrafluoroborate, hexafluorophosphate, or hexafluoroantimonate and M is rhodium or iridium.

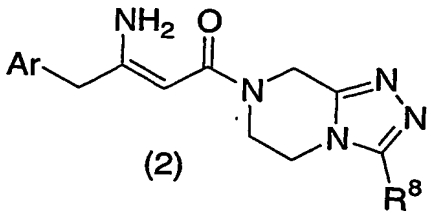
9. The process of Claim 8 wherein said transition metal precursor is $[Rh(cod)Cl]_2$.

10. A process for preparing a compound of structural formula 1:



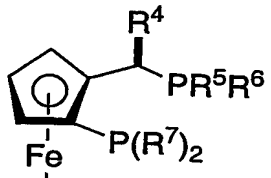
(1)

having the (*R*)-configuration at the stereogenic center marked with an ***;
in an enantiomeric excess of at least 70% over the enantiomer having the opposite (*S*)-configuration; wherein
Ar is phenyl which is unsubstituted or substituted with one to five substituents independently selected from the group consisting of fluorine, trifluoromethyl, and trifluoromethoxy; and
R^8 is hydrogen or C_{1-4} alkyl unsubstituted or substituted with one to five fluorines;
comprising the step of:
hydrogenating a compound of structural formula 2:



(2)

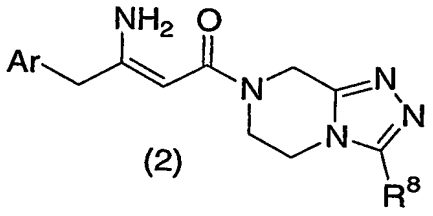
in a suitable organic solvent in the presence of a rhodium metal precursor and a chiral ferrocenyl disphosphine of structural formula IV:



(IV)

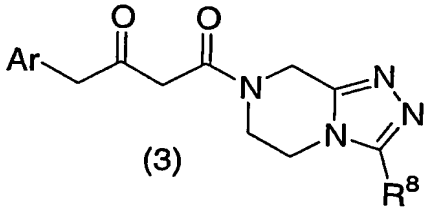
wherein R^4 is C_{1-4} alkyl or aryl;
R^5 and R^6 are each independently C_{1-6} alkyl, C_{5-12} cycloalkyl, or aryl; and
R^7 is C_{1-4} alkyl or unsubstituted phenyl.

11. The process of Claim 10 additionally comprising the step of producing a compound of structural formula 2:



(2)

by treating a compound of structural formula 3:



(3)

with a source of ammonia in a suitable organic solvent.

12. The process of Claim 10 wherein Ar is 2,5-difluorophenyl or 2,4,5-trifluorophenyl and R^8 is trifluoromethyl.

13. The process of Claim 10 wherein said rhodium metal precursor is $[Rh(cod)Cl]_2$.

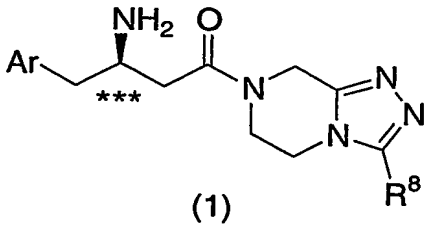
14. The process of Claim 10 wherein R^4 is methyl, R^5 and R^6 are both *t*-butyl, and R^7 is unsubstituted phenyl.

15. The process of Claim 14 wherein said rhodium metal precursor is $[Rh(cod)Cl]_2$.

16. The process of Claim 10 wherein R^4 is methyl, R^5 and R^6 are both *t*-butyl, R^7 is unsubstituted phenyl, Ar is 2,5-difluorophenyl or 2,4,5-trifluorophenyl, R^8 is trifluoromethyl, and the rhodium metal precursor is chloro(1,5-cyclooctadiene)rhodium(I) dimer.

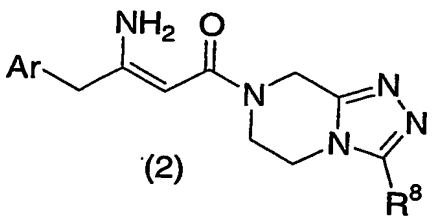
17. The process of Claim 11 wherein said source of ammonia is ammonium acetate.

18. A process for preparing a compound of structural formula 1:



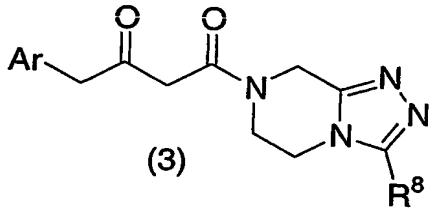
(1)

having the (*R*)-configuration at the stereogenic center marked with an ***;
in an enantiomeric excess of at least 70% over the enantiomer having the opposite (*S*)-configuration; wherein
Ar is phenyl which is unsubstituted or substituted with one to five substituents independently selected from the group consisting of fluorine, trifluoromethyl, and trifluoromethoxy; and
R^8 is hydrogen or C_{1-4} alkyl unsubstituted or substituted with one to five fluorines;
comprising the steps of:
(a) producing a compound of structural formula 2:



(2)

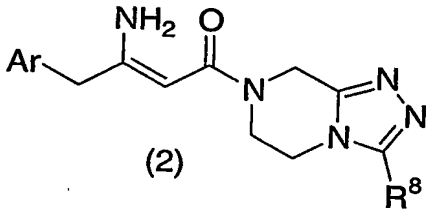
by treating a compound of structural formula 3:



(3)

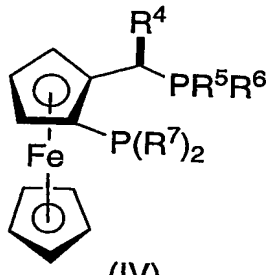
with a source of ammonia in a suitable organic solvent; and

(b) hydrogenating a compound of structural formula 2:



(2)

in a suitable organic solvent in the presence of a rhodium metal precursor and a chiral ferrocenyl disphosphine of structural formula IV:



(IV)

wherein R^4 is C_{1-4} alkyl or aryl;
R^5 and R^6 are each independently C_{1-6} alkyl, C_{5-12} cycloalkyl, or aryl; and
R^7 is C_{1-4} alkyl or unsubstituted phenyl.

19. The process of Claim 2 wherein Z is OR^2.

20. The process of Claim 19 wherein R^1 is 6-methoxy-pyridin-3-yl and Z is C_{1-4} alkoxy.

21. The process of Claim 20 wherein Z is methoxy or ethoxy.

22. The process of Claim 21 wherein R^4 is methyl, R^5 and R^6 are *t*-butyl, R^7 is phenyl, and said transition metal precursor is $[Rh(cod)Cl]_2$.